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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/588,398	08/03/2006	Samuel Bron	0-06-172 (17660/US/CIP)	8382

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EXAMINER
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WINKLER, MELISSA A

ART UNIT	PAPER NUMBER
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1796

MAIL DATE	DELIVERY MODE
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04/28/2009

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/588,398	<b>Applicant(s)</b> BRON ET AL.	
	<b>Examiner</b> MELISSA WINKLER	<b>Art Unit</b> 1796	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 January 2009.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                       | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/28/08</u> .   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 1 – 7, 12, and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,338,478 to Barry et al. in view of US 4,525,420 to Imai et al.

**Regarding Claims 1 – 7, 12, and 13.** Barry et al. teach a stabilizer composition for preventing scorching in polyurethane foams containing flame retardants (Column 1, Lines 51 – 61; Column 4, Line 64 – Column 5, Line 3). A mixture of two types of antioxidant agents, a diarylamine and a hindered phenol, is used in the composition (Column 1, Lines 51 – 61). The diarylamine used may also be a mixture of alkylated diphenylamines (Column 2, Lines 10 – 26). The stabilizer composition further comprises a pentaerythritol phosphite such as bis(2,4-di-*t*-butylphenyl)pentaerythritol diphosphite (Column 1, Lines 51 – 61; Column 2, Line 59 – Column 3, Line 9). The stabilizer composition may be added to a polyurethane foam-forming reaction mixture which may further comprise stannous octoate, a metallic salt of carboxylic acid (Column 3, Lines 46 – 63 and Column 4, Lines 39 – 48).

Barry et al. do not teach the composition further comprises an epoxy compound. However, Imai et al. also teach a polyurethane formulation in which bisphenol A

diglycidyl ether is included (Column 5, Lines 38 - 51). Barry et al. and Imai et al. are analogous art as they are from the same field of endeavor, namely polyurethane compositions in which compounds for avoiding discoloration are employed. At the time of invention, it would have been obvious to a person of ordinary skill in the art to use bisphenol A diglycidyl ether in the composition taught by Barry et al. The motivation would have been that bisphenol A diglycidyl ether acts as a discoloration inhibitor in polyurethanes (Imai et al.: Column 5, Lines 38 - 51).

**Claims 8 - 11** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,338,478 to Barry et al. in view of US 4,525,420 to Imai et al., as applied to Claim 1 above, as evidenced by US 5,106,883 to Horacek.

**Regarding Claims 8 - 11.** Barry et al. teach the composition of Claim 1 wherein the composition is added to a mixture for preparing a polyurethane foam. The mixture further comprises the fire retardant Thermolin 101 from Olin Corp. (Example 2). While Barry et al. do not expressly teach the composition of Thermolin 101, Horacek teach Thermolin 101 to be ethylene glycol bis(di-2-chloroethyl phosphate) (Column 3, Lines 11 - 12).

Furthermore, a composition is evaluated by what it is rather than what it does. Independent Claim 1 is related to a composition whereas Claims 8 - 11 provide limitations regarding a foam, which has not been claimed, into which the composition of Claim 1 can be incorporated. Accordingly, Claims 8 - 11 are not further limiting in as so far as the composition of Claim 1 is concerned.

**Claims 14 – 20, 25, and 26** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,338,478 to Barry et al. in view of US 4,525,420 to Imai et al.

**Regarding Claims 14 – 20, 25, and 26.** Barry et al. teach a method for preventing scorching in polyurethane foams containing flame retardants through the use of a stabilizing composition (Column 1, Lines 51 – 61; Column 4, Line 64 – Column 5, Line 3). The composition may be added to the reaction mixture used to form the foam prior to foaming (Example 2). A mixture of two types of antioxidant agents, a diarylamine and a hindered phenol, is used in the composition (Column 1, Lines 51 – 61). The diarylamine used may also be a mixture of alkylated diphenylamines (Column 2, Lines 10 – 26). The stabilizer composition further comprises a pentaerythritol phosphite such as bis(2,4-di-*t*-butylphenyl)pentaerythritol diphosphite (Column 1, Lines 51 – 61; Column 2, Line 59 – Column 3, Line 9). The stabilizer composition may be added to a foamable reaction mixture which may further comprise stannous octoate, a metallic salt of carboxylic acid (Column 3, Lines 46 – 63 and Column 4, Lines 39 – 48).

Barry et al. do not teach the composition used in their method further comprises an epoxy compound. However, Imai et al. also teach a polyurethane formulation in which bisphenol A diglycidyl ether is included (Column 5, Lines 38 - 51). At the time of invention, it would have been obvious to a person of ordinary skill in the art to use bisphenol A diglycidyl ether in the composition taught by Barry et al. The motivation would have been that bisphenol A diglycidyl ether acts as a discoloration inhibitor in polyurethanes (Imai et al.: Column 5, Lines 38 - 51).

**Claims 21 - 24** are rejected under 35 U.S.C. 103(a) as being unpatentable over US 5,338,478 to Barry et al. in view of US 4,525,420 to Imai et al., as applied to Claim 14 above, as evidenced by US 5,106,883 to Horacek.

**Regarding Claims 21 - 24.** Barry et al. teach the method of Claim 14 wherein the stabilizing composition is added to a mixture for preparing a polyurethane foam. The

mixture further comprises the fire retardant Thermolin 101 from Olin Corp. (Example 2). While Barry et al. do not expressly teach the composition of Thermolin 101, Horacek teach Thermolin 101 to be ethylene glycol bis(di-2-chloroethyl phosphate) (Column 3, Lines 11 - 12).

### ***Response to Arguments***

Applicant's arguments filed November 6, 2008 have been fully considered but they are not persuasive because:

A) Regarding applicant's argument that Barry et al. do not teach a composition comprising an epoxy compound, this limitation is taught by Imai et al.

B) Regarding applicant's argument that Barry et al. do not teach that metal salts of carboxylic acids may be used as antiscorching agents, a composition is evaluated by what it is rather than by its intended properties.

Furthermore, applicants indicate that Barry et al. teach the use of metal salts of carboxylic acids as foaming catalysts and indicate this use to be commonly recognized in the art (Page 1 of Remarks). The fact then that applicant has noted another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985).

C) Applicant argues that Imai et al. do not teach the use of an epoxy compound alone as a discoloration inhibitor. Imai teach using an epoxy compound, diglycidyl ether, only in conjunction with dimethylhydrazine. Applicant indicates that bisphenol A diglycidyl ether will react with an equimolar amount of amino-group of the hydrazine, consequently leaving no free epoxy compound. However, even if this is the case, the instant claims are directed not to a reaction product but, rather, to a

composition comprising an epoxy compound and a method in which an epoxy compound is added to a polyurethane composition. As Imai et al. teach the addition of an epoxy compound to a polyurethane solution, it is the Office's position that Imai et al. meets the epoxy limitation present in the claims.

D) Regarding applicant's argument that Imai et al. do not teach that bisphenol diglycidyl ether alone has an anti-scorching effect in polyurethane foams, the instant claims set forth compositions "comprising" a list of ingredients. They consequently do not exclude the use of dimethylhydrazine in conjunction with bisphenol diglycidyl ether.

### *Conclusion*

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

*Correspondence*

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MELISSA WINKLER whose telephone number is (571)270-3305. The examiner can normally be reached on Monday - Friday 7:30AM - 5PM E.S.T..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571)272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Mark Eashoo/  
Supervisory Patent Examiner, Art Unit 1796

MW  
April 24, 2009